TYPE II QUANTUM WELL MID-INFRARED OPTOELECTRONIC DEVICES

ABSTRACT

Semiconductor optoelectronic devices such as diode lasers are formed on InP substrates with an active region with an InAsN or InGaAsN electron quantum well layer and a GaAsSb or InGaAsSb hole quantum well layer which form a type II quantum well. The active region may be incorporated in various devices to provide light emission at relatively long wavelengths, including light emitting diodes, amplifiers, surface emitting lasers and edge-emitting lasers.